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Ohio Performance Trials of Spring Oat Cultivars

Including 1995 Results

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THE OHIO STATE UNIVERSITY
OARDC

The Ohio State University
Ohio Agricultural Research and Development Center
Wooster, Ohio

PERFORMANCE TRIALS OF SPRING OAT CULTIVARS IN OHIO -- 1995 Season[1]

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OAT GROWING CONDITIONS AND PRODUCTION IN OHIO IN 1995

Oat planting began in Ohio as early as the second week of March. Cool wet conditions throughout April and May however, slowed planting so that it was not completed until the third week of May. In some fields, oats were subjected to conditions favorable to lodging. Adequate moisture with cooler than normal temperatures resulted in lush vegetative growth prior to heading. Beginning on 4 July, thunderstorms resulted in sporadic but severe lodging. High temperatures and high moisture combined for rapid weed development. These conditions combined to create a challenging harvest season.

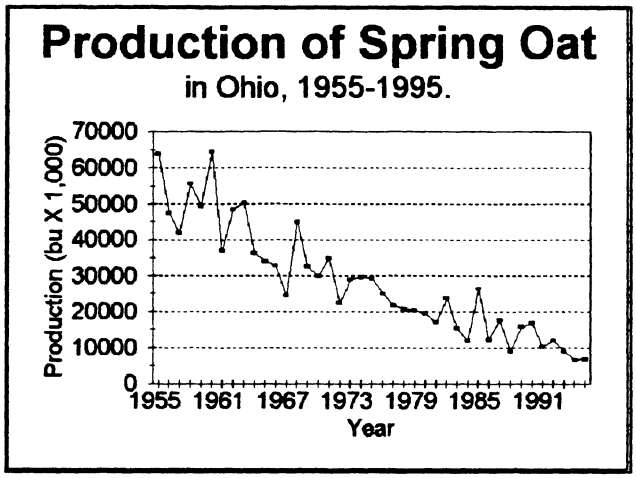

Figure 1

Despite weather conditions that made harvest difficult, oat production in Ohio was up by 5.6 percent compared to 1994 (Fig 1). Harvested acres dropped to 100,000 acres from the 1994 level of 120,000 acres. Yield, however, showed an increase of 27% to 71 bushels per acre in 1995 resulting in an overall oat production of 7.1 million bushels.

Despite the increase in production, oat prices have begun to strengthen (Fig 2) with an August, 1995 price of $1.65 per bushel received in Ohio. The 1995 average price received

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per bushel through August was $1.54. The final average price received for 1995 should be higher reflecting a strengthening price through the end of the year.

Increases in oat prices are due to several factors: (1) Ending stocks for the 1995-96 crop year were estimated by the USDA at 88 million bushels, the lowest in recent history; (2) Import estimates have been lowered due to reductions in oat exports from Sweden and Finland as mandated by GATT; and (3) there are potential changes in oat exports from Canada due to the end of the Western Grain Transportation Act rail subsidy. In addition, other feed grain stocks are declining world wide leading to increases in the price of corn, barley, and wheat. As feeding operations seek the cheapest feed grain, oats will continue to be in demand. This could result in U.S. oat ending stocks estimates dropping even further, thus creating an incentive to plant oats in 1996.

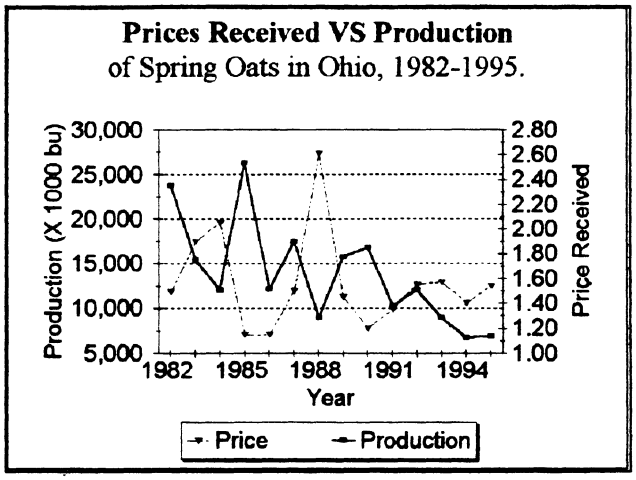

Figure 2

1995 STATEWIDE DRILLED PLOT YIELD TEST

The objective of this oat cultivar evaluation is to provide an unbiased evaluation of cultivar characteristics and performance expectations for the soils and climates of Ohio. In 1995, spring oat performance trials were sown at six locations (Fig. 3) in Ohio; (1) Main Campus, OARDC, Wooster; (2) NW Branch, OARDC, Custar; (3) Mahoning County Farm, Canfield; (4) Western Branch, OARDC, South Charleston; (5) Southern Branch, OARDC, Ripley; and (6) Ohio Foundation Seeds, Inc., Croton. Fertilization at each site was uniform and conformed to fertilizer recommendations published in the Ohio Agronomy Guide. Nitrogen was applied at 40 to 60 lbs/acre at each location depending on soil organic matter content. All locations except Croton were drilled in 7-inch rows, 7 to 11 rows per plot and averaged 100 feet in length. Plots at Croton were sown 15 feet in length by 5 feet in width and trimmed to 12 feet in length prior to harvest.

The growing season started well at all locations. Planting was timely. Adequate moisture with cooler than normal temperatures resulted in lush vegetative growth. A taller than normal crop made the nurseries susceptible to severe lodging at Wooster. Beginning on 4 July, a series of thunderstorms flattened the yield tests at Wooster and Canfield. High temperatures and high moisture combined for rapid weed development. Because of the severe lodging and weeds, the evaluation nurseries were unharvestable at Wooster and Canfield. Although the Wooster test was not harvested, heading dates, plant height, and percent lodging data were collected and analyzed and are included in this report.

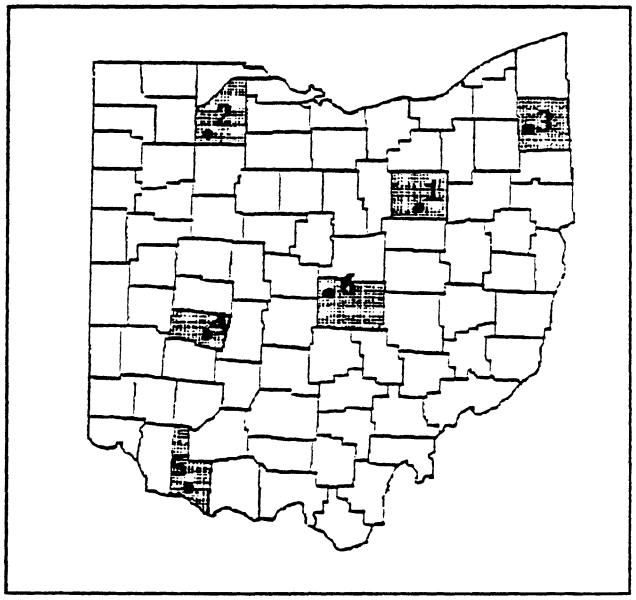

Figure 3 Planting Locations.

TEST RESULTS

Table 1 presents yield data from the four locations harvested in 1995. Northwestern Branch showed the highest productivity with an average yield of 137.3 bushels per acre (bu/a). At that location, Ogle had the highest yield with 150.0 bu/a. Averaged across the four locations however, four advanced experimental lines outyielded Ogle with OH1128 ranked first in the test followed by OH1055 (tentatively scheduled to be released as a cultivar in September of 1996). Ohio's newest cultivar release, Chairman, showed an average yield of 92.8 bu/a, .5 bu/a less than Ogle.

Table 2 presents test weight data from three locations. Averaged across locations, Noble was ranked first for test weight at 35.0 pounds per bushel (lb/bu). Noble was followed by the experimental line OH1065, and Porter. Chairman was ranked sixth with an average test weight of 33.8 lb/bu.

Table 3 presents additional agronomic data averaged across five locations in 1995. Chairman was ranked first in maturity being an average of two days earlier than Ogle and four days earlier than Armor. Brawn was the shortest cultivar in 1995 and also showed the lowest average percent lodging.

Tables 4 through 8 summarize the data collected in 1995 and over the past 4 to 14 seasons at each location. Table 9 presents mean yields averaged from 1982 to 1995. Table 10 summarizes agronomic data for entries grown in the test from 1982 to 1995.

Brief descriptions of cultivars of interest to Ohio growers follow the data tables.

Table1. 1995 Yield of 16 Spring Oat Varieties at Four Locations in Ohio, 1995.

Variety		N'Western Branch	Western Branch	Southern Branch	Croton, Oh	Average 4-loc.
				——bu/a——		
OH1128		137.7	61.2	110.5	86.8	98.6
OH1055		140.7	59.1	100.5	90.8	97.5
OH1096		143.3	56.9	108.2	76.0	95.7
OH1087		141.8	54.4	104.6	77.7	94.6
OH1086		139.3	53.2	103.8	77.7	94.0
OGLE		150.0	48.7	106.5	70.9	93.3
CHAIRMAN		142.2	44.5	111.1	73.1	92.8
OH1120		138.8	50.4	112.3	66.1	92.7
OH1065		137.0	56.0	91.7	78.2	92.0
ARMOR		140.0	55.3	105.0	66.3	90.6
OH1095		130.5	46.1	103.4	73.8	88.7
OH1104		132.9	56.3	101.2	61.0	88.0
BRAWN		134.4	46.2	106.0	64.3	87.0
NOBLE		132.1	44.5	101.1	61.5	85.7
PORTER		130.3	44.0	93.8	58.2	80.8
HERCULES		125.2	48.9	86.5	46.7	77.4
MEAN:		137.3	51.6	102.9	70.6	90.596
LSD.05:		8.5	10.6	11.8	ns	7.9
CV(%):		4.5	14.4	8.2	25.4	12.5

Table 2. Test Weight of 16 Spring Oat Varieties at Three Locations in Ohio in 1995.

Variety		N'Western Branch	Western Branch	Southern Branch	Average 3-loc.
			——lb/bu——		
NOBLE		36.7	35.0	33.2	35.0
OH1065		36.1	35.6	31.8	34.5
PORTER		36.6	36.4	30.4	34.5
OH1128		37.1	35.5	29.6	34.1
OH1120		36.2	36.1	29.6	33.9
CHAIRMAN		34.8	34.0	32.7	33.8
OH1104		35.2	34.0	32.2	33.8
HERCULES		36.1	32.4	32.3	33.6
OH1055		34.7	35.2	30.8	33.6
OGLE		34.6	33.6	31.8	33.3
ARMOR		34.4	34.1	31.4	33.3
OH1087		34.3	33.3	32.3	33.3
OH1096		35.0	34.2	30.6	33.3
BRAWN		33.8	33.5	32.5	33.3
OH1095		34.8	34.3	30.0	33.0
OH1086		34.5	34.0	30.3	32.9
Mean:		35.3	34.5	31.3	33.7

Table 3. Average Days to Heading, Plant Height, and Percent Lodging of 16 Spring Oat Varieties at 5 Locations in Ohio in 1995.

		Date Headed	Rank	Plant Height	Rank	Lodging	Rank
		(d*)		(in)		(%)	
ARMOR		169	13	40.4	7	30.9	7
PORTER		170	14	40.4	5	41.6	12
OGLE		167	6	40.4	6	30.6	6
BRAWN		168	8	35.8	1	9.5	1
HERCULES		170	15	40.8	9	43.2	14
NOBLE		167	3	40.3	4	32.8	8
CHAIRMAN		165	1	39.4	2	26.3	4
OH1055		168	10	40.9	10	33.0	9
OH1065		168	9	41.5	13	43.8	15
OH1086		168	11	42.4	15	27.2	5
OH1087		167	4	41.1	11	33.9	11
OH1095		167	5	42.1	14	33.8	10
OH1096		168	7	44.0	16	43.0	13
OH1104		171	16	40.6	8	19.4	3
OH1120		165	2	41.4	12	50.6	16
OH1128		169	12	40.3	3	14.7	2
MEAN:		167.8		40.742		32.137	
LSD.05:		0.7		1.3		12.26	
CV(%):		0.6		4.58		54.68	

* Days after January 1.

Table 4. Summary of Agronomic Characteristics for Spring Oat Varieties at the Ohio Agricultural Research and Development Center/OSU, Wooster, Ohio, 1982-1995.

VARIETY	YIELD* (bu/a)	rank	DAYS TO HEADING (d)	PLANT HEIGHT (in.)	LODGING (%)	TEST WT.* (lb/bu)	rank
			14-yr. averages 1982-1995				
NOBLE	97.2	3	165	37.1	6.7	35.4	1
OGLE	**104.5**	**2**	**165**	**37.6**	**6.8**	**33.3**	**3**
PORTER	105.4	1	168	38.1	18.2	35.3	2
MEAN:	102.4		166.1	37.6	10.6	34.7	
			6-yr. averages 1990-1995				
ARMOR	103.3	1	168	38.8	4.5	34.8	5
HERCULES	**92.4**	**4**	**168**	**39.4**	**12.1**	**35.9**	**3**
NOBLE	92.0	6	166	37.7	5.9	36.2	1
OGLE	**92.6**	**3**	**166**	**37.8**	**5.6**	**33.5**	**7**
PORTER	95.3	2	169	39.0	24.9	35.7	4
MEAN:	95.1		167.3	38.5	10.6	35.2	
			1995				
ARMOR			171	41.9	16.2		
PORTER			**171**	**41.2**	**79.2**		
OGLE			**168**	**41.0**	**27.4**		
BRAWN			170	36.0	32.0		
HERCULES			172	41.9	65.8		
NOBLE			**169**	**39.7**	**25.3**		
CHAIRMAN			**167**	**38.7**	**22.5**		
OH1055			170	40.9	37.9		
OH1065			169	41.7	58.4		
OH1086			**170**	**42.8**	**34.5**		
OH1087			**169**	**40.3**	**13.1**		
OH1095			169	43.9	19.4		
OH1096			170	44.4	56.2		
OH1104			**173**	**41.2**	**26.8**		
OH1120			**167**	**43.9**	**48.4**		
OH1128			171	41.6	12.6		
MEAN:			169.7	41.3	36.0		
LSD.05:			0.7	2.6	29.7		
CV(%):			0.3	4.5	59.6		

*Yield and Test Weight Data unavailable in 1994 & 1995.

Table 5. Summary of Agronomic Characteristics for Spring Oat Varieties at the Northwestern Branch, Custar, Ohio, 1982-1995.

VARIETY	YIELD (bu/a)	rank	DAYS TO HEADING (d)	PLANT HEIGHT (in.)	LODGING (%)	TEST WT. (lb/bu)	rank
			----------14-yr. averages 1982-1995----------				
NOBLE	86.9	3	163	33	23.8	34.0	2
OGLE	**95.7**	**2**	**163**	**34**	**24.3**	**33.0**	**3**
PORTER	97.1	1	167	34	26.9	34.7	1
MEAN:	93.2		164.4	33.6	25.0	33.9	
			----------6-yr. averages 1990-1995----------				
ARMOR	95.7	1	168	32	21.9	33.2	4
HERCULES	**79.0**	**4**	**169**	**32**	**11.3**	**33.7**	**1**
NOBLE	78.6	5	166	31	24.6	33.6	3
OGLE	**83.7**	**2**	**167**	**32**	**16.1**	**32.7**	**5**
PORTER	83.0	3	171	31	22.5	33.6	2
MEAN:	84.0		168.3	31.7	19.3	33.4	
			----------1995----------				
ARMOR	140.0	6	167	41.1	77.0	34.4	14
PORTER	**130.3**	**15**	**170**	**39.8**	**70.7**	**36.6**	**3**
OGLE	**150.0**	**1**	**165**	**40.3**	**61.0**	**34.6**	**12**
BRAWN	134.4	11	167	33.9	9.0	33.8	16
HERCULES	125.2	16	169	41.3	55.4	36.1	5
NOBLE	**132.1**	**13**	**165**	**42.0**	**86.0**	**36.7**	**2**
CHAIRMAN	**142.2**	**3**	**163**	**40.9**	**64.4**	**34.8**	**9**
OH1055	140.7	5	167	40.7	63.2	34.7	11
OH1065	137.0	10	168	41.4	81.6	36.1	6
OH1086	**139.3**	**7**	**167**	**41.9**	**59.3**	**34.5**	**13**
OH1087	**141.8**	**4**	**165**	**40.8**	**91.0**	**34.3**	**15**
OH1095	130.5	14	166	42.0	96.5	34.8	10
OH1096	143.3	2	167	43.9	97.7	35.0	8
OH1104	**132.9**	**12**	**169**	**41.5**	**43.3**	**35.2**	**7**
OH1120	**138.8**	**8**	**163**	**39.2**	**96.8**	**36.2**	**4**
OH1128	137.7	9	167	38.7	39.5	37.1	1
MEAN:	137.3		166.5	40.6	68.3	35.3	
LSD.05:	8.5		0.8	2.0	19.7	--	
CV(%):	4.5		0.4	3.5	20.8	--	

Table 6. Summary of Agronomic Characteristics for Spring Oat Varieties at Western Branch, South Charleston, Ohio, 1982-1995.

VARIETY	YIELD (bu/a)	Rank	DAYS TO HEADING (d)	PLANT HEIGHT (in.)	LODGING (%)	TEST WT. (lb/bu)	rank
			----------13-yr. averages 1982-88, 1990-95----------				
NOBLE	66.6	3	160	30.5	7.7	34.3	2
OGLE	74.9	1	159	31.1	3.3	33.1	3
PORTER	70.7	2	163	31.1	6.9	34.9	1
MEAN:	70.7		160.6	30.9	6.0	34.1	
			----------6-yr. averages 1990-1995----------				
ARMOR	60.3	1	166	31.8	0.8	33.2	4
HERCULES	53.9	3	167	31.8	1.2	33.7	3
NOBLE	49.9	5	164	31.3	1.8	34.3	2
OGLE	59.0	2	163	31.9	2.0	33.1	5
PORTER	50.8	4	167	31.4	1.8	34.8	1
MEAN:	54.8		165.3	31.6	1.5	33.8	
			----------1995----------				
ARMOR	55.3	6	166	37.0	0.0	34.1	9
PORTER	44.0	16	167	36.3	0.0	36.4	1
OGLE	48.7	11	163	37.3	0.0	33.6	13
BRAWN	46.2	12	164	34.8	0.0	33.5	14
HERCULES	48.9	10	167	36.3	0.0	32.4	16
NOBLE	44.5	14	164	37.0	2.5	35.0	6
CHAIRMAN	44.5	15	163	35.5	0.0	34.0	11
OH1055	59.1	2	163	37.5	0.0	35.2	5
OH1065	56.0	5	163	36.8	0.0	35.6	3
OH1086	53.2	8	165	37.8	0.0	34.0	12
OH1087	54.4	7	163	38.5	0.0	33.3	15
OH1095	46.1	13	163	37.5	0.0	34.3	7
OH1096	56.9	3	163	40.0	0.0	34.2	8
OH1104	56.3	4	170	36.0	0.0	34.0	10
OH1120	58.4	9	162	37.8	16.0	36.1	2
OH1128	61.2	1	165	38.5	0.0	35.5	4
MEAN:	51.6		164.3	37.1	1.2	34.5	
LSD.05:	10.6		0.8	2.3	8.2	36.9	
CV(%):	14.4		0.3	4.3	501.5	--	

Table 7. Summary of Agronomic Characteristics for Spring Oat Varieties at the Southern Branch, Ripley, Ohio, 1984-1995.

VARIETY	YIELD (bu/a)	Rank	DAYS* TO HEADING (d)	PLANT HEIGHT (in.)	LODGING (%)	TEST WT. (lb/bu)	Rank
			----------10-yr. averages 1984-85,1987-88, 1990-95----------				
NOBLE	57.4	3	160	33.3	14.5	34.0	1
OGLE	**65.5**	**1**	**160**	**33.6**	**14.7**	**33.2**	**3**
PORTER	60.2	2	163	33.6	15.1	32.6	2
MEAN:	61.0		160.7	33.5	14.8	33.3	
			----------6-yr. averages 1990-95----------				
ARMOR	75.2	1	164	35.7	7.4	34.4	4
HERCULES	**59.3**	**5**	**165**	**36.4**	**12.6**	**35.6**	**1**
NOBLE	59.5	4	162	36.1	11.9	35.4	2
OGLE	**66.8**	**2**	**163**	**36.5**	**15.0**	**34.9**	**3**
PORTER	60.5	3	167	36.5	13.3	33.6	5
MEAN:	64.3		164.1	36.2	12.0	34.8	
			----------1995----------				
ARMOR	105.0	7		41.8	20.0	31.4	9
PORTER	93.8	14		44.7	12.7	30.4	12
OGLE	**106.5**	**5**		**43.4**	**21.7**	**31.8**	**8**
BRAWN	**106.0**	**6**		**40.8**	**10.5**	**32.5**	**3**
HERCULES	86.5	16		42.9	32.6	32.3	4
NOBLE	101.1	12		42.3	18.1	33.2	1
CHAIRMAN	**111.1**	**2**		**43.3**	**14.7**	**32.7**	**2**
OH1055	**100.5**	**13**		**45.5**	**19.1**	**30.8**	**10**
OH1065	91.7	15		45.4	28.4	31.8	7
OH1086	103.8	9		46.9	22.8	30.3	13
OH1087	**104.6**	**8**		**44.2**	**28.2**	**32.3**	**5**
OH1095	**103.4**	**10**		**45.5**	**24.6**	**30.0**	**14**
OH1096	108.2	4		47.0	24.5	30.6	11
OH1104	101.2	11		43.1	16.2	32.2	6
OH1120	**112.3**	**1**		**44.0**	**55.6**	**29.6**	**16**
OH1128	**110.5**	**3**		**41.9**	**20.4**	**29.6**	**15**
MEAN:	102.9			43.9	23.1	31.3	
LSD.05:	11.8			2.4	16.7	--	
CV(%):	8.2			4.0	52.0	--	

* Days to Heading not available in 1994 or 1995.

Table 8. Summary of Agronomic Characteristics for Spring Oat Varieties at Ohio Foundation Seeds. Inc., Croton, Ohio, 1990-1995.

VARIETY	YIELD (bu/a)	Rank	DAYS TO HEADING (d)	PLANT* HEIGHT (in.)	LODGING (%)	TEST WT.* (lb/bu)	Rank
			5-yr. averages 1990-91, 1993-1995				
ARMOR	78.4	2	173	33.7	1.7	32.3	6
HERCULES	**64.5**	**5**	**174**	**35.1**	**1.9**	**32.2**	**4**
NOBLE	75.9	3	171	32.6	5.6	33.3	1
OGLE	**80.6**	**1**	**172**	**33.6**	**5.1**	**32.0**	**2**
PORTER	70.4	4	174	34.1	2.5	34.1	3
Mean:	74.0		172.8	33.8	3.4	32.8	
			1995				
ARMOR	**66.3**	**10**	**171**		**2.0**		
PORTER	**58.2**	**15**	**173**		**4.3**		
OGLE	70.9	9	172		3.0		
BRAWN	64.3	12	169		3.0		
HERCULES	**46.7**	**16**	**174**		**2.0**		
NOBLE	**61.5**	**13**	**171**		**2.8**		
CHAIRMAN	73.1	8	167		2.0		
OH1055	90.8	1	171		3.5		
OH1065	**78.2**	**3**	**171**		**3.0**		
OH1086	**77.7**	**4**	**172**		**1.5**		
OH1087	77.7	5	171		3.5		
OH1095	73.8	7	170		4.0		
OH1096	**76.0**	**6**	**171**		**3.3**		
OH1104	**61.0**	**14**	**172**		**1.8**		
OH1120	66.1	11	169		4.0		
OH1128	86.8	2	171		2.0		
MEAN:	70.6		170.9		2.8		
LSD.05:	ns		2.7		1.6		
CV(%):	25.4		1.1		40.4		

* Plant heights & test weights not available in 1995.

Table 9. Yield of Spring Oat Varieties in Ohio Trials, 1982-95.

Cultivar	1982 4 Trials	1983 5 Trials	1984 5 Trials	1985 5 Trials	1986 4 Trials	1987 5 Trials	1988 5 Trials	1989 4 Trials	1990 5 Trials	1991 6 Trials	1992 5 Trials	1993 6 Trials	1994 6 Trials	1995 4 Trials	Rank 1994 only	Avg. 32 Trials (1990-95)	rank	Avg. 36 Trials (1989-95)	rank	Avg. 69 Trials (1982-95)	rank
	----------bu/a----------															(bu/a)		(bu/a)		(bu/a)	
NOBLE	**79.8**	**76.8**	**77.0**	**98.3**	**99.2**	**77.7**	**59.2**	**77.5**	**88.8**	**72.3**	**81.8**	**50.8**	**54.2**	**85.7**	**14**	**69.4**	**5**	**60.7**	**4**	**70.3**	**3**
OGLE	**91.0**	**92.1**	**84.5**	**105.7**	**120.9**	**84.4**	**68.7**	**95.2**	**92.7**	**79.6**	**69.8**	**60.5**	**66.0**	**93.3**	**6**	**75.7**	**2**	**77.0**	**1**	**84.0**	**1**
PORTER	88.4	84.4	84.7	117.7	117.2	85.1	60.0	92.0	84.6	75.5	80.9	51.1	67.0	80.8	15	72.3	3	75.8	2	82.8	2
HERCULES						80.9	55.4	81.7	76.4	74.2	81.4	56.9	60.8	77.4	16	70.3	4	72.0	3		
ARMOR									**96.8**	**84.3**	**89.3**	**65.3**	**71.9**	**90.6**	**10**	**81.9**	**1**				
CHAIRMAN											**89.5**	**56.6**	**61.4**	**92.8**	**7**						
OH1055											93.1	67.2	72.7	97.5	2						
BRAWN												63.2	61.0	87.0	13						
OH1065													**76.3**	**92.0**	**9**						
OH1087													**72.2**	**94.6**	**4**						
OH1086													74.0	94.0	5						
OH1095													66.7	88.7	11						
OH1096													**67.7**	**95.7**	**3**						
OH1104													**63.8**	**88.0**	**12**						
OH1120														92.7	8						
OH1128														98.6	1						
MEAN:	86.4	84.4	82.1	107.2	112.4	82.0	60.8	86.6	86.3	77.2	83.7	59.0	66.8	90.6		73.9		71.4		79.0	

Table 10. Summary of Agronomic Characteristics of Spring Oat Varieties in Ohio Trials, 1982-1995.

Cultivar	Days to Heading		Plant Ht.		Lodging		Test weight		Whole kernel protein	
	64 trials (1982-95)	30 trials (1990-95)	65 trials (1982-95)	31 trials (1990-95)	67 trials (1982-95)	32 trials (1990-95)	62 trials (1982-95)	28 trials (1990-95)	46 trials (1982-93)	17 trials (1991-93)
	(from Jan. 1)		----(in.)----		-------(%)-------		(lb/bu.)		------(%)------	
NOBLE	164	166	33.2	33.2	13.4	10.8	33.9	34.1	14.2	13.8
OGLE	**164**	**166**	**33.8**	**33.9**	**12.4**	**9.7**	**32.7**	**33.0**	**13.1**	**13.0**
PORTER	167	170	34.1	34.0	16.1	13.8	34.2	33.8	13.5	13.3
ARMOR		**168**		**33.9**		**7.9**		**33.3**		**12.4**
HERCULES		168		34.4		7.8		33.9		14.0
MEAN:	165.0	167.6	33.7	33.9	14.0	10.0	33.6	33.6	13.6	13.3

Brief Descriptions of Spring Oat Cultivars

Armor - Armor was released by the Ohio Agricultural Research and Development Center in 1991. It is stiff-strawed with excellent yield potential, exceeding Noble, Ogle, and Porter in yield in statewide Ohio tests. Armor is a midseason cultivar with medium height. It is resistant to BYDV but susceptible to crown rust.

Brawn -This cultivar was released by the University of Illinois Agricultural Experiment Station and the USDA in 1993. Brawn has large, "brawny", yellow kernels. It has been equal to, or slightly better than, Ogle for yield in Illinois trials and in Ohio. It has crown rust and smut resistance and is moderately tolerant to BYDV. Brawn is a day later in maturity than Armor and several days later than Ogle.

Chairman - Chairman was officially released by the Ohio Agricultural Research and Development Center in September, 1995. It will be available to growers in the spring of 1997. Chairman was released because of its high yield potential and early maturity. It is comparable to 'Ogle' and 'Armor' in yield while being two and three days earlier, respectively, in maturity. Chairman is susceptible to current races of crown rust (*Puccinia coronata*) showing a reaction similar to Ogle to this disease.

Clintford - Medium-short, stiff strawed, and early, it has relatively compact panicles with large, heavy, yellow kernels. Clintford is resistant to some of the common races of crown and stem rust and exhibits some degree of tolerance to barley yellow dwarf virus. Although it has low yield potential compared to newer cultivars, it has high test weight and excellent quality. Clintford is a 1964 Indiana release.

Dal - Released by the Wisconsin Agricultural Experiment Station in 1972, it is moderately late in maturity and of medium to tall height. It has good lodging resistance, large, plump kernels, high test weight and high groat protein. Dal has excellent resistance to smut and leaf rust, but is susceptible to Septoria and barley yellow dwarf virus. A U.S. Protected Variety, seed of this variety can be sold only as a class of certified seed.

Dane - Released by The Wisconsin Agricultural Experiment Station in 1990, it is early in maturity, averaging 5 days earlier than Ogle in both Wisconsin and Ohio tests, and has excellent yield potential. Dane has yellow kernels with high groat percentage. Test weights are average and straw strength is excellent. Although susceptible to barley yellow dwarf virus in screening tests, Dane has demonstrated field tolerance under severe natural infection.

Don - A 1986 Illinois release, Don is a high yielding early maturing variety with excellent test weight. It has short straw, but is only moderately resistant to lodging. Don has excellent resistance to crown rust and smut, is moderately resistant to BYDV, but is susceptible to stem rust.

Hamilton -A 1989 release by the Iowa Agriculture and Home Economics Experiment Station, it is a high yielding variety with midseason maturity and excellent lodging resistance. Hamilton is unusual in having both cytoplasmic and nuclear genes from Avena sterilis. It is intermediate in test weight, height and BYDV resistance.

Hazel - A 1986 Illinois release, it is a high yielding variety with midseason maturity. Hazel has short stiff straw and excellent resistance to lodging. It has excellent resistance to prevalent races of crown rust and BYDV, but is susceptible to prevalent races of stem rust and smut.

Hercules - A 1986 release by the Pennsylvania Agricultural Experiment Station, Hercules is a high yielding variety with excellent lodging resistance and test weight. It is resistant to currently known races of loose smut, and moderately resistant to BYDV, but susceptible to prevalent races of crown rust and stem rust.

Heritage - A Michigan developed variety released in 1980, it was first tested in Ohio in 1982. A late, tall variety with apparently good straw strength, and high yield potential, Heritage is susceptible to barley yellow dwarf virus and loose smut. A U.S. Protected Variety, seed of this variety can be sold only as a class of certified seed.

Horicon - A 1989 release by the Wisconsin Agricultural Experiment Station, Horicon combines high yield potential with unusually high groat percentage. It is midseason in heading and has resistance to prevalent races of crown rust. Horicon is intermediate in test weight, height and maturity.

Larry - A 1981 Illinois release, it is early maturing, short and lodging resistant. Larry has good to excellent yield potential with moderate resistance to rusts and excellent resistance to barley yellow dwarf virus.

Newdak -A 1990 cultivar released jointly by the Agricultural Experiment Station of North Dakota State University and Cornell. Newdak is about a day earlier than Ogle in Ohio tests. It has excellent resistance to crown rust and tolerance to BYDV. Newdak has white hulls under unweathered conditions.

Noble - A 1973 Indiana release, it has good yield, good test weight and stiff, medium-short straw. It is medium-early in maturity, with moderate resistance to barley yellow dwarf virus and some of the oat rusts. A U.S. Protected Variety, seed can be sold only as a class of certified seed.

Ogle - A 1981 Illinois release, it has excellent yield capabilities with good test weight and will yield well under a wide range of environments. Ogle is medium-early in maturity with medium-short, stiff straw and moderate resistance to oat rusts. It has excellent resistance to barley yellow dwarf virus.

Otee - A 1973 Illinois release, it is early and medium-short with good lodging resistance. It is resistant to many of the older races of oat rusts, but is susceptible to some of the newer races. It has resistance to barley yellow dwarf virus, but is less resistant than Ogle. It is average for yield with good test weight.

Pennuda - A 1987 release by the Pennsylvania Agricultural Experiment Station, Pennuda is an early maturing, lodging resistant naked-seeded cultivar with a relatively high yield potential[1]. It is high in protein and digestible energy and is especially useful in rations for poultry, swine and young animals. Pennuda is moderately resistant to BYDV but is susceptible to crown rust and loose smut.

Porter - A 1982 Purdue University release, it is rather late in maturity, but has an excellent yield record. It is resistant to barley yellow dwarf virus and moderately resistant to crown rust. A U.S. Protected Variety, seed of this variety can be sold only as a class of certified seed.

Premier - A 1990 release by The Minnesota Agricultural Experiment Station, it is similar to Ogle in heading date, height and lodging resistance. It has excellent test weight and groat percentage. Premier is moderately resistant to crown rust and slightly tolerant to barley yellow dwarf virus.

Settler - A 1989 release by the South Dakota Agricultural Experiment Station, Settler has high yield potential and good resistance to crown rust. It is moderately resistant to BYDV. Settler is midseason to late in maturity with moderate to weak straw in Ohio tests.

The cultivars Armor, Hercules, Noble,and Ogle were grown by Ohio Certified Seed Producers in 1995. All other cultivars may not be available from Ohio suppliers unless purchased or produced out-of-state.

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[1] When compared to other cultivars on a dehulled basis, Pennuda yields comparably to cultivars such as Noble, Hercules, and Hamilton.


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